

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 80-17

WATER RECLAMATION REQUIREMENTS FOR:

NOVATO SANITARY DISTRICT
NOVATO AND IGNACIO PLANTS
MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. Novato Sanitary District (hereinafter discharger) has submitted a report of waste discharge dated December 14, 1979.
2. The discharger proposes the following:
 - a. Approximately 1020 acres of land will be irrigated with secondary treated wastewater.
 - b. Animals, other than milking cows and goats, will be pastured on land irrigated with wastewater.
 - c. Sufficient storage and irrigation will be provided so that all the discharger's wastewater will be contained without discharge to State waters from June 1 through August 31.
 - d. From September 1 through May 31, wastewater may be discharged to San Pablo Bay from the treatment plants, or the wildlife pond.
3. The discharge from the treatment plants to San Pablo Bay or wildlife pond from September 1 through May 31 will be covered by a separate set of requirements adopted by the Regional Board.
4. Section 13523 of the California Water Code provides that a Regional Board, after consulting with and receiving the recommendations of the State Department of Public Health, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. The use of reclaimed water for the purposes specified in Finding 2 could affect the public health, safety, or welfare, and requirements for these uses are therefore necessary in accordance with the Water Code.
5. The Board adopted a Water Quality Control Plan for San Francisco Bay Basin in April 1975. The water quality objectives for reclaimed wastewater, as set forth in the Basin Plan, specify those limits prescribed in Title 17, Section 8025 through 8050, California Administrative Code. These objectives have been superseded by Title 22, Section 60301 - 60357, California Administrative Code.

6. Novato Sanitary District, as lead agency for the Eastern Marin and Southern Sonoma Wastewater Agencies requested an NPDES Permit time extension for construction of required facilities. This request was pursuant to Section 301(i)(1) of the Federal Water Pollution Control Act (FWPCA), as amended. The Board finds the request warranted and grants the time extension for compliance with Section 301(b) pursuant to Section 301(i) of the Act.
7. Novato Sanitary District as lead agency for the Eastern Marin and Southern Sonoma Wastewater Agencies certified a final Environmental Impact Report (EIR) on September 17, 1979 for their wastewater management projects in accordance with the California Environmental Quality Act (Public Resources Code, Section 2100 et seq.). The members of this Regional Board have received and reviewed a summary of these documents.
8. The EIR specifies that this project could have the following adverse impacts on the environment:
 - a. Possible odors from the wastewater treatment plant may affect nearby residents;
 - b. Mosquito and midge control are potential problems; and
 - c. Degradation of soil is possible.
9. Compliance with Prohibition A.2. of this Order will mitigate adverse impacts of Finding 8.a. To maintain compliance, the discharger will construct improvements for covering, venting and scrubbing exhaust gases on the following units:
 - Novato Treatment Plant - Headworks, primary clarifier, aeration tanks, fixed-film reactor, final clarifier, sludge thickener and degritting facilities, and digester off-gas equipment.
 - Ignacio Treatment Plant - Primary clarifiers and primary biofilter.
 - Bahia Pump Station - Pumping station wet well. In addition, facilities to inject odor control chemicals in force main and control odors from air release valves in pipeline will be included.
10. The discharger will design and manage the treatment and irrigation facilities to mitigate adverse impacts of Finding 8.b. and 8.c.
11. The Board has notified the discharger and interested agencies and persons of its intent to prescribe water reclamation requirements for the proposed uses.
12. This Board at a public meeting heard and considered all comments pertaining to this reuse.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. The collection, treatment, distribution, reuse or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. Unless written authorization permitting reclamation of wastewater on a specific field or defined area is received from this Board's Executive Officer, the discharger shall not permit such a discharge of wastewater.
3. Wastewater shall not impair ground water quality.

B. Discharge Specifications

1. Wastewater within one foot of the surface of wastewater storage or treatment ponds shall meet the following limits at all times:
 - a. Dissolved oxygen 2.0 mg/l minimum
 - b. Dissolved Sulfide 0.1 mg/l maximum
 - c. pH 6.0 minimum
 9.0 maximum
2. A minimum freeboard of at least 2 feet shall be maintained in storage **ponds**.
3. Storage ponds shall be protected against erosion, washout and flooding from a flood having a predicted frequency of once in 100 years.
4. At some point in the treatment process the wastewater shall meet the following limits at all times:
 - a. BOD 40 mg/l maximum 30 day average
 - b. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria per 100 milliliters when verified by a repeat sample taken within 48 hours.

C. Reclaimed Wastewater Use Limitations

1. Use of reclaimed wastewater under provisions of this Order shall be limited to irrigation of fodder, fiber and seed crops or discharge to the wildlife pond.
2. Areas irrigated with reclaimed wastewater shall be fenced and clearly identified with posted notices to the public. The method and form of notification shall be subject to the review and approval of the Executive Officer.
3. Reclaimed wastewater shall be applied to use areas in a manner which will prevent public contact with the wastewater.

4. All equipment, including pumps, piping, valves, etc., which may at anytime contain waste shall be adequately and clearly identified with warning signs, and the discharger shall make all necessary provisions, in addition, to inform the public that the liquid contained is sewage and is unfit for human consumption.
5. No reclaimed wastewater used for irrigation shall be allowed to escape to any area outside the disposal areas, either by surface flow or airborne spray. The disposal area shall be defined to mean the spray irrigation areas plus the ditch system draining the areas.
6. Reclaimed water shall be applied so as to minimize accumulation of water in the ditch system. Discharge of tailwater collected in the ditch system shall be prohibited from June 1 through August 31 except under written authorization of the Executive Officer. Such authorization shall be granted only upon a demonstration by the discharger that discharge is necessary for the control of a nuisance condition, **or to maintain the agricultural operations, and that beneficial uses of receiving waters will be protected.**
7. Wastewater irrigation ponding which could provide a breeding area for mosquitoes shall be prevented.
8. If a quality or use requirement should be violated, the irrigation with reclaimed wastewater shall be immediately terminated and not resumed until the discharger has corrected all violations and conditions which would permit the violations to recur.

D. Provisions

1. The discharger shall promote and encourage increased reclamation to reduce the amount of discharge to San Pablo Bay during the period from September 1 through May 31.
2. Ninety (90) days prior to commencement of wastewater reclamation the discharger shall submit to the Board (a) maps showing exact areas and fields to be irrigated; (b) maps showing locations of domestic and irrigation wells in, or adjacent to, the irrigation areas; and (c) a report (after consultation with the Health Department) that is satisfactory to the Executive Officer on how each will be adequately protected.
3. This Order includes item nos. 1, 2, 3, 4, 5, 8, 9 and 10 in the **attached** "Requirements of Design for Reclamation Facilities" dated October 1, 1975. A technical report documenting planned compliance with the above shall be submitted by September 1, 1980.
4. The discharger shall file with the Board technical reports on self-monitoring work performed according to detailed specifications as directed by the Executive Officer.

5. The discharger shall permit the Board or its authorized representatives:
 - a. Entry upon premises in which an effluent source is located or in which any required records are kept.
 - b. Access to copy any records required to be kept under terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or method required by this Order.
 - d. Sampling of any discharge.
6. The discharger shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the water reclamation requirements.
7. The discharger shall include all provisions in the leases with farm operators and landowners needed to assure full compliance with the requirements of this Order.
8. The discharger shall submit by May 1, 1983 a management plan for the wildlife pond which is acceptable to the Executive Officer. The plan will identify habitat objectives and staffing needs.
9. The discharger shall file with the Regional Board a report on waste discharge at least 180 days before making any material change or proposed change in the character, location or volume of reuse.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 15, 1980.

FRED H. DIERKER
Executive Officer

Attachment :
Requirements of Design for Reclamation
Facilities dated 10/1/75

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Novato Sanitary District

Wastewater Reclamation

Novato, Marin County

ORDER NO. 80-17

CONSISTS OF

PART A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

PART A

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are:

1. To document compliance with waste discharge requirements and prohibitions established by this Regional Board.
2. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge.

II. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

A. Effluent

<u>Station</u>	<u>Description</u>
E-001	At any point in the Ignacio outfall following all treatment and prior to discharge (to ponds or reclamation). (1)
E-002	At any point in the Novato plant outfall following all treatment and prior to discharge. (1)
E-003	Combined effluent from the two plants, calculated arithmetically based on the respective flows and pollutant concentrations from each plant. (1)

<u>Station</u>	<u>Description</u>
E-004	At the point where treated wastewater enters the wildlife pond.(3) May be the same as E-003 if effluent is discharged directly to wildlife pond.
E-005	At the point where treated wastewater leaves the wildlife pond.(3)
E-006	Water column sampling location in the wildlife pond at least 300 feet from the pond inlet or outlet and having a representative depth.(3)
E-007	At any point in storage pond 1 where a representative sample of treated wastewater can be obtained.(3)
E-008	At any point in storage pond 2 where a representative sample of treated wastewater can be obtained.(3)
E-009	At any point in the reclamation system immediately prior to reclamation (by spray irrigation).(2)
E-010	At the point where tailwater would be discharged to surface waters.(2)

- (1) Sampling required only during the period June 1 to August 31.
- (2) Sampling required whenever reclamation occurs, may extend beyond the June 1 to August 31 period.
- (3) Sampling required year-round.

B. L Stations

Pond levee stations are to be located at the corners and midpoint of each pond.

Annual reports and self-monitoring reports shall contain a map or maps clearly showing the location of these stations.

III. SCHEDULE FOR SAMPLING AND OBSERVATIONS

See Table 1 and attached notes.

IV. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations of Requirements

In the event the discharger is unable to comply with the conditions of the water reclamation requirement and prohibitions due to:

- (a) maintenance work, power failures, or breakdown of waste treatment equipment, or
- (b) accidents caused by human error or negligence, or
- (c) other causes such as acts of nature,

the discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

2. Self-Monitoring Report


Written reports shall be filed with the Regional Board on the 15th of each month. The reports shall specifically cover each applicable point in the monitoring program. Any violations shall be clearly identified, and actions taken or planned for correcting violations shall be included. Monitoring reports shall be signed by the District Manager or his duly authorized representative. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

3. Annual Report

An annual report summarizing the use of reclaimed water shall be submitted to the Board by December 1 of each year. This report shall contain a summary and analysis of the water quality data from the effluent stations. The report shall also contain a list of all violations of requirements in the previous season.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 80-17.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.


ROGER B. JAMES
Executive Officer

Effective Date April 11, 1986

Attachments: Map
Table I

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

[illegible]

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001 & E-002	E-003	E-004	E-005	E-006	E-007	E-008	E-009	E-010	L	
TYPE OF SAMPLE	C-24	G	(1)	G	G	(5) G	G	G	C-24	C-24	O
Mercury (mg/l & kg/day)											
Nickel (mg/l & kg/day)											
Zinc mg/l & kg/day)											
Phenolic Compounds (mg/l & kg/day)											
All Applicable Standard Observsations										(6) W	
Bottom Sediment Analyses and Observations											
Tot. Ident. Chlori. Hydro- carbons (mg/l & kg/day)											

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
 C-6 = composite sample - 6-hour
 C-X = composite sample - X hours
 (used when discharge does not
 continue for 24-hour period)
 Cont = continuous sampling
 DI = depth-intergrated sample
 BS = bottom sediment sample
 O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
 A = treatment facility influent stations
 E = waste effluent stations
 C = receiving water stations
 P = treatment facilities perimeter stations
 L = basin and/or pond levee stations
 B = bottom sediment stations
 G = groundwater stations

FREQUENCY OF SAMPLING

E = each occurrence
 H = once each hour
 D = once each day
 W = once each week
 M = once each month
 Y = once each year

2/H = twice per hour
 2/W = 2 days per week
 5/W = 5 days per week
 2/M = 2 days per month
 2/Y = once in March and
 once in September
 Q = quarterly, once in
 March, June, Sept.
 and December

2H = every 2 hours
 2D = every 2 days
 2W = every 2 weeks
 3M = every 3 months
 Cont = continuous

Table I Notes

1. Calculated value for combined effluent from both treatment plants. Flow data should be added. A weighted average based on flow should be used for other parameters.
2. The discharger will record daily flow of any discharge of irrigation tail water from the ditch system to waters of the State (in addition to complying with item C.6 in Order 80-17).
3. The discharger will conduct an initial study of chlorine residual in plant effluent as effluent flows through the storage ponds prior to reaching the wildlife pond, under a range of different operating conditons. This initial study will be completed within three months of start-up of full reclamation activities. If this initial study shows that chlorine is consistently removed prior the wildlife pond, then the discharger may take weekly grab samples at station E-003 and use the results to demonstrate zero residual entering the wildlife pond.
4. The median value for the last five analyses shall be used to determine compliance with the 240 MPN/100 ml requirement. Any single value of 10,000 MPN/100 ml occuring for any two consecutive samples shall be reported as a violation.
5. Water column samples will consist of one sample taken one foot below the surface, and a second sample taken one foot above the pond bottom.
6. Pond dike station observations should include:
 - (i) Pond freeboard
 - (ii) Dike condition
 - (iii) Evidence of seepage through the dike
 - (iv) Scum or aquatic plant growth on the pond surface, if any
 - (v) Other weekly inspection items listed in the February, 1981 plan for design, operation, and maintenance of the wildlife pond (Appendix C) and not already required above
7. The discharger has the option of conducting a special study in August-September 1986. If the Executive Officer concludes that the wildlife pond exhibits little or no stratification, then he may delete this monitoring station. At least four samples should be taken on separate days. Samples should be taken in the early morning (before 8:00 a.m.) and following a typical hot summer day.

Map: Novato S.D. Wastewater Reclamation Project

